



Community and personalization

by W. Bender

In a sense, information technology has come of age. Although not all of the necessary infrastructure is in place, the capacity for efficient distribution of information electronically is a *fait accompli*. But do we use this capacity to communicate effectively? Providing access to content is not sufficient to guarantee effective message passing. A message delivered but ignored, or a message ingested but not digested, is not useful. In order to inform, the “recipient” must find the message content engaging and relevant. It is the contention of the News in the Future group at the MIT Media Laboratory that effective communication requires distribution of messages that are rich in description. These descriptions, when taken with consideration of the context of both the individuals and the communities receiving them, can result in messages that are both engaging and useful.

The critical underlying technologies of information technology are those that afford access and relevancy: machine understanding of content, observation of context, and instructive mediation between message provider and message recipient. As critical as the engineering issues is the question of how information technology becomes a part of the social fabric within communities, a catalyst for creating communities of interest, and a means of facilitating community introspection.

Linking individuals and their communities

One way in which we address these issues is in the creation of prototype news applications. In the first paper in this section, “Enriching Communities: Harbingers of News in the Future,” my coauthors and I describe four examples of personalized news systems and how these systems impact the communities in which they have been used. While the technology employed in these systems varies from “off-the-shelf” to “cutting-edge,” the communities in which the experiments have been conducted are even more varied: a university setting, an immigrant population, and an urban community. The common theme of all of these news systems is the engaged participant, in two-way communication with the traditional news provider and with the other members of communities built upon common interests. The next two papers detail some of the underlying technologies used in these examples.

The goal of our work in message understanding is to help automate the creation of structured representations that are compatible with broadcasting, publishing, and networking applications. Managing data well can improve the precision of the queries and filters used to access image, text, and audio databases, whether these queries are initiated by human editors or computational surrogates. “FramerD: Representing Knowledge in the Large,” by Haase, describes how relational retrieval can be used to support content-aware media. This approach brings us closer to machine understanding of content by extracting hints about meaning from the context. The representation of this content and its access are integrated into a hybrid programming environment that facilitates the development of interactive distributed applications.

In order to build linkages among individuals, the communities in which they interact, and the experts who serve them, we are developing systems to discern an individual’s interests and to facilitate the formation of communities of interests. “Newsworthiness” is defined to be that which is important to the individual or community. The

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expression of a message can be personalized by context analysis that complements the decision-making of human editors. “For Want of a Bit the User Was Lost: Cheap User Modeling,” by Orwant, describes the field of user modeling. The author illustrates his essay with examples from the DOPPELGÄNGER system, a distributed architecture that supports observation about individuals and communities, inference based upon machine-learning algorithms, and a network service for applications that can make use of this knowledge. Gregory Bateson, in *Steps to an Ecology of Mind* (Ballentine, New York [1972]), coined the term “metalogue” to refer to a dialog that is both an example and an explanation. Orwant has structured his paper as a metalogue; he incorporates “two independent yet parallel flows.” Each flow is a path through a single essay aimed at one of two hypothetical readers.

The final two papers in this section examine the relationships between technology, community, and children. At the Media Lab, we are interested in what people, particularly children, learn as they engage in various news-related activities: selecting, gathering, analyzing, and composing news for themselves and their peers. The paper “Children’s Interests in News: On-Line Opportunities,” by Evard, surveys children’s interests in on-line news, including a description of experiments the author has conducted in an elementary school classroom. The final paper in this section, “The Computer Clubhouse: Preparing for Life in a Digital World,” by Resnick and Rusk, describes the Computer Clubhouse, an afterschool program that prepares inner-city children for life in the digital world by providing them with the means to create and consume news.

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